



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2021-0461; Project Identifier MCAI-2021-00156-R;

Amendment 39-21775; AD 2021-22-02]

RIN 2120-AA64

Airworthiness Directives; Leonardo S.p.a. Helicopters

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for all Leonardo S.p.a. Model AB139 and AW139 helicopters. This AD was prompted by a report of a short circuit caused by chafing of the electrical wiring in the overhead panel. This AD requires an initial detailed inspection inside the overhead panel for certain helicopters, repetitive detailed inspections inside the overhead panel for all helicopters, and corrective actions if necessary, as specified in a European Union Aviation Safety Agency (EASA) AD, which is incorporated by reference. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: For material incorporated by reference (IBR) in this AD, contact the EASA, Konrad-Adenauer-Ufer 3, 50668 Cologne, Germany; phone: +49 221 8999 000; email: ADs@easa.europa.eu; Internet: www.easa.europa.eu. You may find this material

on the EASA website at <https://ad.easa.europa.eu>. You may view this material at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call 817-222-5110. It is also available in the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0461.

Examining the AD Docket

You may examine the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0461; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Jacob Fitch, Aerospace Engineer, COS Program Management Section, Operational Safety Branch, Compliance & Airworthiness Division, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177; phone: (817) 222-4130; email: jacob.fitch@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

The EASA, which is the Technical Agent for the Member States of the European Union, has issued EASA AD 2021-0044, dated February 5, 2021 (EASA AD 2021-0044) (also referred to as the Mandatory Continuing Airworthiness Information, or the MCAI), to correct an unsafe condition for all Leonardo S.p.a. Model AB139 and AW139 helicopters.

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to all Leonardo S.p.a. Model AB139 and

AW139 helicopters. The NPRM published in the *Federal Register* on June 14, 2021 (86 FR 31451). The NPRM was prompted by a report of a short circuit caused by chafing of the electrical wiring in the overhead panel. The NPRM proposed to require an initial detailed inspection inside the overhead panel for certain helicopters, repetitive detailed inspections inside the overhead panel for all helicopters, and corrective actions if necessary, as specified in EASA AD 2021-0044.

The FAA is issuing this AD to address a short circuit caused by chafing of the electrical wiring in the overhead panel, which could cause damaged electrical wiring, possible fire in the overhead panel, and loss of control of the helicopter. See the MCAI for additional background information.

Comments

The FAA gave the public the opportunity to participate in developing this final rule. The following presents the comment received on the NPRM and the FAA's response to each comment.

Request to Include Credit for Later Service Information

An anonymous commenter requested that the FAA revise the NPRM to include a paragraph that allows credit for the use of a later revision of the service information referenced in EASA AD 2021-0044.

The FAA disagrees with the request because, in this case, credit is unnecessary. The FAA is incorporating by reference EASA AD 2021-0044 as the method for accomplishing the actions required by this AD. EASA AD 2021-0044 includes the Ref. Publications section, which allows the use of later approved revisions of the service information referenced in EASA AD 2021-0044. Therefore, no change has been made to this AD.

Conclusion

The FAA reviewed the relevant data, considered the comment received, and determined that air safety and the public interest require adopting this final rule as proposed, except for minor editorial changes. The FAA has determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM for addressing the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM.

Related Service Information Under 1 CFR Part 51

EASA AD 2021-0044 requires an initial detailed inspection (for certain helicopters) inside the overhead panel for chafing of the cable harnesses and for correct clearance between the anchor nuts/screws and the cable harnesses, of the screws for correct length, and of the supports for sound bonding, and corrective actions if necessary; repetitive detailed inspections (for all helicopters) inside the overhead panel for the condition of the white protective tape on the anchor nuts, and for chafing of the cable harnesses and for correct clearance between the anchor nuts/screws and the cable harnesses, and corrective actions if necessary. Corrective actions include applying a white protective tape on the anchor nuts, replacement of incorrect length screws, replacement of damaged cables and fuses, rerouting of cable harnesses, replacement of supports, and removal and replacement of the white protective tape.

This material is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

Differences Between this AD and the MCAI

Although EASA AD 2021-0044 and the service information referenced in EASA AD 2021-0044 specify to submit certain information to the manufacturer, this AD does not include that requirement.

Interim Action

The FAA considers this AD interim action. If final action is later identified, the FAA might consider further rulemaking then.

Costs of Compliance

The FAA estimates that this AD affects 128 helicopters of U.S. Registry. The FAA estimates the following costs to comply with this AD:

Estimated costs for required actions

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Inspection for chafing, clearance, screw length, and bonding	1 work-hour X \$85 per hour = \$85	\$0	\$85	\$10,880
Repetitive inspections for chafing, clearance, and tape condition	1 work-hour X \$85 per hour = \$85 per inspection cycle	\$0 per inspection cycle	\$85 per inspection cycle	\$10,880 per inspection cycle

The FAA estimates the following costs to do any necessary on-condition actions that would be required based on the results of any required actions. The FAA has no way of determining the number of helicopters that might need these on-condition actions:

Estimated costs of on-condition actions

Action	Labor cost	Parts cost	Cost per product
Replace screws,	5 work-hours X \$85 per hour =	\$600	\$1.025

cables, fuses, supports, and protective tape; reroute harnesses	\$425		
Apply protective tape	1 work-hour X \$85 per hour = \$85	\$50	\$135
Replace cables, fuses and protective tape	1 work-hour X \$85 per hour = \$85	\$600	\$685

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA’s authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency’s authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Will not affect intrastate aviation in Alaska, and

(3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive:

2021-22-02 Leonardo S.p.a.: Amendment 39-21775; Docket No. FAA-2021-0461; Project Identifier MCAI-2021-00156-R.

(a) Effective Date

This airworthiness directive (AD) is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to all Leonardo S.p.a. Model AB139 and AW139 helicopters, certificated in any category.

(d) Subject

Joint Aircraft System Component (JASC) Code 2400, Electrical Power System.

(e) Unsafe Condition

This AD was prompted by a report of a short circuit caused by chafing of the electrical wiring in the overhead panel. The FAA is issuing this AD to address a short

circuit caused by chafing of the electrical wiring in the overhead panel, which could cause damaged electrical wiring, possible fire in the overhead panel, and loss of control of the helicopter.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Requirements

Except as specified in paragraph (h) of this AD: Comply with all required actions and compliance times specified in, and in accordance with, European Union Aviation Safety Agency (EASA) AD 2021-0044, dated February 5, 2021 (EASA AD 2021-0044).

(h) Exceptions to EASA AD 2021-0044

(1) Where EASA AD 2021-0044 refers to its effective date, this AD requires using the effective date of this AD.

(2) The “Remarks” section of EASA AD 2021-0044 does not apply to this AD.

(3) Where EASA AD 2021-0044 refers to flight hours (FH), this AD requires using hours time-in-service.

(4) Where paragraphs (3) and (5) of EASA AD 2021-0044 refer to “any discrepancy,” for this AD, discrepancies include chafing of the cable harnesses or incorrect clearance between the anchor nuts/screws and the cable harnesses, incorrect length of the screws, inadequately bonded supports, and poor condition of the white protective tape.

(i) No Reporting Requirement

Although EASA AD 2021-0044 and the service information referenced in EASA AD 2021-0044 specify to submit certain information to the manufacturer, this AD does not include that requirement.

(j) Special Flight Permit

Special flight permits may be issued in accordance with 14 CFR 21.197 and 21.199 to operate the helicopter to a location where the helicopter can be modified (if the operator elects to do so), provided the flight is straight, level, and avoids areas of known turbulence.

(k) Alternative Methods of Compliance (AMOCs)

(1) The Manager, International Validation Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the International Validation Branch, send it to the attention of the person identified in paragraph (l) of this AD. Information may be emailed to: 9-AVS-AIR-730-AMOC@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(l) Related Information

For more information about this AD, contact Jacob Fitch, Aerospace Engineer, COS Program Management Section, Operational Safety Branch, Compliance & Airworthiness Division, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177; phone: (817) 222-4130; email: jacob.fitch@faa.gov.

(m) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless this AD specifies otherwise.

(i) European Union Aviation Safety Agency (EASA) AD 2021-0044, dated February 5, 2021.

(ii) [Reserved]

(3) For EASA AD 2021-0044, contact the EASA, Konrad-Adenauer-Ufer 3, 50668 Cologne, Germany; phone: +49 221 8999 000; email: ADs@easa.europa.eu; Internet: www.easa.europa.eu. You may find this EASA AD on the EASA website at <https://ad.easa.europa.eu>.

(4) You may view this service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call 817-222-5110. This material may be found in the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0461.

(5) You may view this material that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email fr.inspection@nara.gov, or go to <https://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued on October 13, 2021.

Gaetano A. Sciortino, Deputy Director for Strategic Initiatives,
Compliance & Airworthiness Division,
Aircraft Certification Service.